

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A system for delivering location-based services to mobile clients in a building structure using short-range wireless technology, comprising:
a plurality of short range wireless access points adapted to communicate with mobile clients;

a location registry for tracking a location of each mobile client;

and

one or more location-aware service proxies adapted to receive from a mobile client a ~~client~~ requests for a location-based services ~~from the mobile clients~~ and to deliver a responses thereto, the responses comprising location-based information generated provided in view of the requesting client's tracked location as tracked in ~~of the respective mobile client indicated by the~~ location registry;

wherein at least one of the location-aware service proxies is configured to ~~includes~~:

~~means for receiving~~ receive a DNS request specifying a host name from a mobile client,

~~means for determining~~ determine if ~~that~~ the requested host name corresponds to a location-based service, and

responsive to a determination that the requested host name corresponds to a location-based service, ~~means for returning~~ return an IP address of a host of the requested host name located within the same building structure as the mobile client based on the client's location ~~responsive to the determination that the requested host name corresponds to a location-based service.~~

2. (Previously Presented) A system as recited in claim 1, further comprising a module for providing communication between the location registry and each of the access points.

3. (Currently Amended) A system as recited in claim 1, further comprising at least one active client list maintained by a wireless access point points and containing Medium Access Control (MAC) address for a client that is ~~which are currently visible to said maintaining the~~ wireless access point.

4. (Currently Amended) A system as recited in claim 1, wherein ~~said the~~ wireless access points are adapted to detect ~~include means for detecting~~ an identity of a system user.

5. (Currently Amended) A system as recited in claim 1, wherein ~~said the~~ wireless access points are adapted to detect ~~have means for detecting~~ one or more mobile client characteristics.

6. (Currently Amended) A system as recited in claim 1, wherein ~~said the~~ location registry is configured to further comprises:
~~means for receiving~~ receive notification information from ~~the said~~ wireless access points; and
~~means for maintaining~~ maintain a list of wireless access points associated with each of ~~the said~~ mobile clients, responsive to received notification information ~~said-receiving means~~.

7. (Cancelled)

8. (Currently Amended) A system as recited in claim 1, wherein ~~said the~~ one or more location-aware service proxies comprises at least one of: an HTTP proxy, a WSP proxy, a DNS proxy, a message proxy and a directory proxy.

9. (Cancelled)

10. (Currently Amended) A system as recited in claim 8 wherein ~~the said~~ message proxy includes means for filtering a list of current messages requested from a message server based upon a requesting client's location.

11. (Currently Amended) A system as recited in claim 1, further comprising a protocol proxy, ~~the said~~ protocol proxy annotating content received from a particular service proxy ~~one of said service proxies~~.

12. (Currently Amended) A system as recited in claim 11, wherein ~~the said~~ location registry further comprises a query interface with which the protocol proxy can obtain location information about a mobile client.

13. (Cancelled)

14. (Currently Amended) A method for delivering location-based services to a plurality of mobile clients ~~located~~ within a building structure using short-range wireless technology, ~~the mobile clients each carrying a short-range wireless communication device~~; the method comprising the steps of:

receiving a plurality of requests for services from mobile clients; and
providing location-aware services to the mobile clients from a plurality of location-aware service proxies, responsive to the plurality of client requests;

wherein at least one of the location-aware service proxies is adapted to perform the steps of:

receiving a DNS request specifying a host name from a mobile client,
determining that the requested host name corresponds to a location-based service,
and

determining an IP address of a host of ~~for~~ the requested host name located within the same building structure as the mobile client based on the client's location and in response to the determination that the requested host name corresponds to a location-based service.

15. (Cancelled)

16. (Cancelled)

17. (Previously Presented) The method of claim 14, further comprising the steps of:
establishing a plurality of short-range wireless access points adapted to communicate with the mobile clients; and
providing a notification to a location registry upon detecting a mobile client on an access point.

18. (Currently Amended) A method as recited in claim 17, further comprising the step of transmitting a reverse registration notification from the wireless access point to the said location registry upon detecting a mobile client departure from the said wireless access point.

19. (Currently Amended) A method as recited in claim 14, further comprising the ~~step of~~ steps of:

~~monitoring requests made by the mobile clients; and
determining the quantity of time lapsed between requests of the since the previous
detection of traffic for each of said active mobile clients.~~

20. (Currently Amended) A method as recited in claim 19, further comprising the step of defining a mobile client departure from a wireless access point based upon ~~said a determined~~ time lapse.

21. (Currently Amended) A method as recited in claim 17, further comprising the step of transmitting register notifications from a wireless access point to the said location registry at timed intervals, ~~said wherein the register notifications notification including include~~ a list of all mobile clients actively communicating with the wireless ~~said~~ access point, and the said location registry ~~defines defining~~ a mobile client address as unregistered when where the client is not included on the active mobile client list.

22. (Currently Amended) A method as recited in claim 17, further comprising the step of maintaining an active client list associated with each access point, each active client list including ~~corresponding~~ MAC addresses corresponding to clients on the active client list.

23. (Currently Amended) A method as recited in claim 22, further comprising the step of adding a MAC address of a mobile client upon detection of network traffic from the said mobile client.

24. (Currently Amended) A method as recited in claim 22, further comprising the step of deleting a MAC address of a mobile client upon failure to detect ~~respective~~ client traffic therewith within a predetermined time period.

25. (Currently Amended) A method as recited in claim 17, further comprising the step of transmitting notification information from the said wireless access points to the said location registry, the said location registry maintaining a list of current access points associated with each of the mobile clients.

26. (Previously Presented) A method as recited in claim 17, further comprising the step of enhancing the functionality of an access point to identify a system user or a mobile client characteristic.

27. (Previously Presented) A method as recited in claim 17, further comprising the step of adding an access point ID to the location registry for a particular client ID upon receiving a registry notification.

28. (Previously Presented) A method as recited in claim 17, further comprising the step of removing an access point ID from the location registry for a particular client ID upon receiving a reverse registry notification.

29. (Currently Amended) A method as recited in claim 14, further comprising the step of generating responses incorporating location-based information via the said location-aware service proxies.

30. (Cancelled).

31. (Currently Amended) A method as recited in claim 14 wherein the location-aware service proxy further comprises a message proxy, and wherein the method further comprises the step of filtering a list of current messages received from a message server, based upon a client location, via the said message proxy.

32. (Previously Presented) A method as recited in claim 14, wherein the location-aware service proxy further comprises a protocol proxy adapted to annotate messages received from the location-aware service proxy.

33. (Currently Amended) A system as recited in claim 1, further comprising at least one active client list, ~~each of said wherein the at least one active client list is active client lists~~ maintained by an adapter coupled to a ~~distinct one of said~~ wireless access point points and containing a containing Medium Access Control (MAC) ~~address~~ addresses for ~~ones of said a~~ clients ~~that is which are currently visible to the said maintaining~~ wireless access point.

34. (Previously Presented) A system as recited in claim 1 wherein each location-aware service proxy is adapted to intercept requests of a particular type.

35. (Currently Amended) A system as recited in claim 34, wherein each location-aware service proxy is further adapted to determine, from the location registry, the location of a particular client from which a particular ~~client~~ request is intercepted, ~~such that the determined location can be used when generating the location-based information.~~

36. (Currently Amended) A system as recited in claim 35, wherein the determined location comprises a list of ~~ones of~~ each of the access points with which the particular client is currently associated.

37. (Currently Amended) A system as recited in claim 35, wherein the determined location comprises geographic coordinates of ~~ones of~~ each of the access points with which the particular client is currently associated.

38. (Currently Amended) A system as recited in claim 35, wherein the determined location comprises a building and room number of ~~ones of~~ each of the access points with which the particular client is currently associated.

39. (Currently Amended) A system as recited in claim 1, wherein each location-aware service proxy is further adapted for contacting a third-party information source to obtain information for ~~used in~~ generating the location-based information.

40. (Previously Presented) A system as recited in claim 11, wherein the protocol proxy annotates the content with available services.

41. (Previously Presented) A system as recited in claim 40, wherein the available services result from a location-based filtering of an available services list.

42. (Previously Presented) A method as recited in claim 32, wherein at least one of the available services annotations further comprises a link to one of the available services.